

Appl. No. 09/659,737  
Amdt. dated March 8, 2004  
Reply to Final Office Action dated Feb. 12, 2004

### Amendments to the Claims

Claim 1. (Original): An isolated polynucleotide molecule comprising a nucleotide sequence encoding an MLK4 gene product from a human, wherein the MLK4 gene product comprises the amino acid sequence of SEQ ID NO:2.

Claim 2. (Original): The isolated polynucleotide sequence of claim 1 comprising the nucleotide sequence of SEQ ID NO:1.

Claims 3-21. (Cancelled).

Claim 22. (Currently Amended): A recombinant vector comprising ~~any one of the~~ polynucleotide molecule molecules of ~~claims 1-5~~ claim 1, 2, 48, 49, 50, 51 or 53.

Claim 23. (Original): A transformed host cell comprising the recombinant vector of claim 22.

Claim 24. (Cancelled).

Claim 25. (Currently Amended): A method of preparing a substantially purified or isolated polypeptide ~~comprising the amino acid sequence of SEQ ID NO:2 encoded by the recombinant vector of claim 22,~~ comprising culturing host cells transformed with the recombinant vector under conditions ~~conductive~~ conducive to the expression of the polypeptide, ~~or peptide fragment,~~ and recovering in substantially purified or isolated form the polypeptide ~~or peptide fragment~~ from the cell culture.

Claims 26-47. (Cancelled).

Claim 48. (New): An isolated polynucleotide molecule that comprises a nucleotide sequence that is about 90% homologous to SEQ ID NO:1, wherein the isolated polynucleotide molecule encodes a protein that has a kinase activity of an MLK4 gene product.

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Claim 49. (New): | An isolated polynucleotide molecule that comprises a nucleotide sequence that is about 90% homologous to a nucleotide sequence that encodes a polypeptide comprising SEQ ID NO:2, wherein the isolated polynucleotide molecule encodes a protein that has a kinase activity of an MLK4 gene product.

Claim 50. (New): An isolated polynucleotide molecule that specifically hybridizes under highly stringent conditions to a complement of a sequence comprising SEQ ID NO:1, wherein the nucleic acid encodes a protein that has a kinase activity of an MLK4 gene product.

Claim 51. (New): An isolated polynucleotide molecule that specifically hybridizes under highly stringent conditions to a complement of a polynucleotide sequence comprising a nucleotide sequence that encodes a polypeptide comprising SEQ ID NO:2, wherein the nucleic acid molecule encodes a protein that has a kinase activity of an MLK4 gene product.

Claim 52. (New): A process for producing an isolated polynucleotide, comprising hybridizing SEQ ID NO:1 to genomic DNA under highly stringent conditions and isolating the DNA polynucleotide detected with SEQ ID NO:1.

Claim 53. (New): The isolated DNA polynucleotide prepared according to the process of claim 56.

Claim 54. (New): An isolated polynucleotide molecule that is the complement of the polynucleotide molecule of claim 1, 2, 48, 49, 50, 51 or 53.